AUTHOR INDEX

Aherne, F.X., *see* Spicer, H.M. and Aherne, F.X.
Alexander, A.J., *see* Marinier, S.L. et al.
Alexander, G., Stevens, D. and Bradley, L.R. (Sydney, N.S.W., Australia)
Maternal behaviour in ewes following Caesarian section 273
Alhassan, W.S. and Kabuga, J.D. (Kumasi, Ghana)
Dry and wet seasonal studies on the grazing behaviour of native N'dama and imported Friesian bulls in a humid tropical environment 245
Anderson, D.M., Hulet, C.V., Smith, J.N., Shupe, W.L. and Murray, L.W. (Las Cruces, NM, U.S.A.)
Bonding of young sheep to heifers 31
Anderson, D.M., Hulet, C.V., Smith, J.N., Shupe, W.L. and Murray, L.W. (Las Cruces, NM, U.S.A.)
Heifer disposition and bonding of lambs to heifers 27
Anderson, D.M., *see* Hulet, C.V. et al.
Barnett, J.L., *see* Hemsworth, P.H. et al.
Bell, R.W., *see* McCann, J.S. et al.
Blackshaw, A.W., *see* Blackshaw, J.K. et al.
Blackshaw, J.K., Bodero, D.A.V. and Blackshaw, A.W. (St Lucia, Qld., Australia)
The effect of group composition on behaviour and performance of weaned pigs 73
Bodero, D.A.V., *see* Blackshaw, J.K. et al.
Bradley, L.R., *see* Alexander, G. et al.
Bullock, D.J., *see* Woollard, T.H. and Bullock, D.J.
Canart, B., *see* Nicks, B. et al.
Casteilla, L. Orgeur, P. and Signoret, J.P. (Nouzilly, France)
Effects of rearing conditions on sexual performance in the ram: practical use 111
Collins, J.W. and Siegel, P.B. (Blacksburg, VA, U.S.A.)
Human handling, flock size and responses to an *E. coli* challenge in young chickens (short communication) 183
Craig, J.V., *see* Ramos, N.C. and Craig, J.V.
Dechamps, P., *see* Nicks, B. et al.
Eckerlin, A., *see* Millot, J.L. et al.
El Aich, A., (Rabat, Morocco) and Rittenhouse, L.R. (Ft. Collins, CO, U.S.A.)
Herding and forage ingestion by sheep 279
Elwin, R.L., *see* Vince, M.A. et al.
Faure, J.-M., *see* Lagadic, H. and Faure, J.-M.
Filiatre, J.C., *see* Millot, J.L. et al.
Floody, O.R. (Lewisburg, PA, U.S.A.)
Book review of *The hamster—reproduction and behavior*. H.I. Siegel (Editor) 197
Foote, M., *see* Hemsworth, P.H. et al.
Fraser, D. (Ottawa, Ont., Canada)
Suckling behaviour of artificially-reared lambs: what kind of teat elicits spontaneous sucking? 99

Friend, T., *see* Taylor, L. et al.
Gagnon, A.C., *see* Millot, J.L. et al.
Gonyou, H.W., *see* Rohde, K.A. and Gonyou, H.W.
Green, G.C., *see* Vince, M.A. et al.
Grose, P.S., *see* Stuth, J.W. et al.
Hansen, C., *see* Hemsworth, P.H. et al.
Hemsworth, P.H., Winfield, C.G., Barnett, J.L., Hansen, C., Schirmer, B. and Foote, M. (Werribee, Vic., Australia)
The efficiency of boars to detect oestrous females housed adjacent to boars 81
Hemsworth, P.H., Winfield, C.G., Tilbrook, A.J., Hansen, C. and Barnett, J.L. (Werribee, Vic., Australia)
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
Herd, R.M. (Trangie, N.S.W., Australia)
A technique for cross-mothering beef calves which does not affect growth 239
Heird, J.C., *see* McCann, J.S. et al.
Hoekstra, J.A., *see* Jansen, J. and Hoekstra, J.A.
Holmes, L.N., Song, G.K. and Price, E.O. (Davis, CA, U.S.A.)
Head partitions facilitate feeding by subordinate horses in the presence of dominant pen-mates (short communication) 179
Hulet, C.V., Anderson, D.M., Smith, J.N. and Shupe, W.L. (Las Cruces, NM, U.S.A.)
Bonding of sheep to cattle as an effective technique for predation control 19
Hulet, C.V., *see* Anderson, D.M. et al.
Hurnik, J.F., *see* Webster, A.B. and Hurnik, J.F.
Istasse, L., *see* Nicks, B. et al.
Jansen, J. and Hoekstra, J.A. (Wageningen, The Netherlands)
Sampling strategies for clustered behavioural elements of short duration 315
Jones, R.B. (Roslin, Gt. Britain)
Repeatability of fear ranks among adult laying hens 297
Kabuga, J.D., *see* Alhassan, W.S. and Kabuga, J.D.
Lagadic, H. and Faure, J.-M. (Monnaie, France)
Preferences of domestic hens for cage size and floor types as measured by operant conditioning 147
Lickliter, R.E. (Davis, CA, U.S.A.)
Activity patterns and companion preferences of domestic goat kids 137
Lutherer, L.O., *see* McCann, J.S. et al.
Lynch, J.J., *see* Vince, M.A. et al.
Marinier, S.L., Alexander, A.J. and Waring, G.H. (Durban, South Africa)
Flehmen behaviour in the domestic horse: discrimination of conspecific odours 227
McCann, J.S. (Athens, GA, U.S.A.), Bell, R.W., Lutherer, L.O. (Lubbock, TX, U.S.A.) and Heird, J.C. (Ft. Collins, CO, U.S.A.)
Normal and more highly reactive horses. I. Heart rate, respiration rate and behavioural observations 201
McCann, J.S. (Athens, GA, U.S.A.), Bell, R.W., Lutherer, L.O. (Lubbock, TX, U.S.A.) and Heird, J.C. (Ft. Collins, CO, U.S.A.)
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Metz, J.H.M., *see* van Rooijen, J. and Metz, J.H.M.
Millot, J.L., Filiatre, J.C., Eckerlin, A., Gagnon, A.C. and Montagner, H. (Besançon, France)
Olfactory cues in the relations between children and their pet dogs (short communication) 189

Montagner, H., *see* Millot, J.L. et al.
Mottershead, B.E., *see* Vince, M.A. et al.
Murray, L.W., *see* Anderson, D.M. et al.
Nicks, B., Dechamps, P., Canart, B. and Istasse, L. (Bruxelles, Belgium)
Resting behaviour of Friesian bulls maintained in a tie-stall barn under two patterns of lighting 321
Orgeur, P., *see*, Casteilla, L. et al.
Price, E.O., *see* Holmes, L.N. et al.
Ramos, N.C. and Craig, J.V. (Manhattan, KS, U.S.A.)
Pre-laying behavior of hens kept in single- or multiple-hen cages 305
Rice, R.W., *see* Ruyle, G.B. et al.
Rittenhouse, L.R., *see* El Aich, A. and Rittenhouse, L.R.
Roath, L.R., *see* Stuth, J.W. et al.
Rohde, K.A. and Gonyou, H.W. (Urbana, IL, U.S.A.)
Strategies of teat-seeking behaviour in neonatal pigs 57
Ruyle, G.B., Hasson, O. and Rice, R.W. (Tucson, AZ, U.S.A.)
The influence of residual stems on biting rates of cattle grazing *Eragrostis lehmanniana* Nees 11
Schein, M.W., *see* Zenchak, J.J. and Schein, M.W.
Schirmer, B., *see* Hemsworth, P.H. et al.
Shupe, W.L., *see* Anderson, D.M. et al.
Shupe, W.L., *see* Hulet, C.V. et al.
Siegal, P.B. (Blacksburg, VA, U.S.A.)
Book review of *Cognitive Aspects of Social Behaviour in the Domestic Fowl.* R. Zayon and I.J.H. Duncan (Editors) 388
Siegel, P.B., *see* Collins, J.W. and Siegel, P.B.
Signoret, J.P. *see* Casteilla, L. et al.
Smith, J.N., *see* Anderson, D.M. et al.
Smith, J.N., *see* Hulet, C.V. et al.
Smith, L.A., *see* Taylor, L. et al.
Song, G.K., *see* Holmes, L.N. et al.
Spicer, H.M. and Aherne, F.X. (Edmonton, Alb., Canada)
The effects of group size/stocking density on weanling pig performance and behaviour ... 89
Stevens, D., *see* Alexander, G. et al.
Stuth, J.W. (College Station, TX, U.S.A.), Grose, P.S. (Kingsville, TX, U.S.A.) and Roath, L.R. (Fort Collins, CO, U.S.A.)
Grazing dynamics of cattle stocked at heavy rates in a continuous and rotational grazed system 1
Taylor, L., Friend, T. and Smith, L.A. (College Station, TX, U.S.A.)
Effect of housing on in situ postures of gestating gilts 265
Tilbrook, A.J., *see* Hemsworth, P.H. et al.
Van Putten, G. (Zeist, The Netherlands)
Book review of *Topics in Research Regarding Species-Specific Animal Husbandry 1985.* K. Zeeb (Editor) 387
Van Rooijen, J. and Metz, J.H.M. (Wageningen, The Netherlands)
A preliminary experiment on T-maze choice tests 51
Vince, M.A. (Cambridge, Gt. Britain), Lynch, J.J., Mottershead, B.E., Green, G.C. and Elwin, R.L. (Armidale, N.S.W., Australia)
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119

Waring, G.H., *see* Marinier, S.L. et al.
Webster, A.B. and Hurnik, J.F. (Guelph, Ont., Canada)
Heritability of the peep vocalization in white Leghorn-type chicks 157
Winfield, C.G., *see* Hemsworth, P.H. et al.
Woollard, T.H. and Bullock, D.J. (St Andrews, Gt. Britain)
Effects of headfly (*Hydrotaea irritans* Fallen) infestations and repellents on ear-flicking and head-shaking behaviour of farmed red deer (*Cervus elaphus* L.) 41
Zenchak, J.J. (Naperville, IL, U.S.A.) and Schein, M.W. (Morgantown, WV, U.S.A.)
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291

SUBJECT INDEX

Applied ethology general
Topics in research regarding species-specific animal husbandry (book review) 387
Agonistic behaviour
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291
The effect of group composition on behaviour and performance of weaned pigs 73
Boar stimuli
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
The efficiency of boars to detect oestrous females housed adjacent to boars 81
Bonding
Bonding of sheep to cattle as an effective technique for predation control 19
Bonding of young sheep to heifers 31
Heifer disposition and bonding of lambs to heifers 27
Caesarian section
Maternal behaviour in ewes following Caesarian section 273
Cattle
A technique for cross-mothering beef calves which does not affect growth 239
Bonding of sheep to cattle as an effective technique for predation control 19
Bonding of young sheep to heifers 31
Dry and wet seasonal studies on the grazing behaviour of native N'dama and imported Friesian bulls in a humid tropical environment 245
Grazing dynamics of cattle stocked at heavy rates in a continuous and rotational grazed system 1
Heifer disposition and bonding of lambs to heifers 27
Resting behaviour of Friesian bulls maintained in a tie-stall barn under two patterns of lighting 321
Sampling strategies for clustered behavioural elements of short duration 315
The influence of residual stems on biting rates of cattle grazing *Eragrostis lehmanniana* Nees 11
Choice tests
A preliminary experiment on T-maze choice tests 51
Cross-mothering
A technique for cross-mothering beef calves which does not affect growth 239
Deer
Effects of headfly (*Hydrotaea irritans* Fallen) infestations and repellents on ear-flicking and head-shaking behaviour of farmed red deer (*Cervus elaphus* L.) 41
Dog
Classification of behaviour problems in dogs: distributions of age, breed, sex and reproductive status 169
Olfactory cues in the relations between children and their pet dogs 189
Flehmen behaviour
Flehmen behaviour in the domestic horse: discrimination of conspecific odours 227
Genetic factors
Heritability of the peep vocalization in White Leghorn-type chicks 157
Goat
Activity patterns and companion preferences of domestic goat kids 137

Grazing dynamics
Grazing dynamics of cattle stocked at heavy rates in a continuous and rotational grazed system 1
The influence of residual stems on biting rates of cattle grazing *Eragrostis lehmanniana* Nees 11
Growth
A technique for cross-mothering beef calves which does not affect growth 239
The effect of group composition on behaviour and performance of weaned pigs 73
The effects of group size/stocking density on weanling pig performance and behaviour ... 89
Hamster
The hamster—reproduction and behavior (book review) 197
Handling
Human handling, flock size and responses to an *E. coli* challenge in young chickens 183
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Head-shaking behaviour
Effects of headfly (*Hydrotaea irritans* Fallen) infestations and repellents on ear-flicking and head-shaking behaviour of farmed red deer (*Cervus elaphus* L.) 41
Heart rate
Normal and more highly reactive horses. I. Heart rate, respiration and behavioural observations 201
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Horse
Flehmen behaviour in the domestic horse: discrimination of conspecific odours 227
Head partitions facilitate feeding by subordinate horses in the presence of dominant pen-mates 179
Normal and more highly reactive horses. I. Heart rate, respiration and behavioural observations 201
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Housing and accommodation
Effect of housing on in situ postures of gestating gilts 265
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
Preferences of domestic hens for cage size and floor types as measured by operant conditioning 147
Pre-laying behaviour of hens kept in single- or multiple-hen cages 305
Resting behaviour of Friesian bulls maintained in a tie-stall barn under two patterns of lighting 321
The effects of group size/stocking density on weanling pig performance and behaviour ... 89
The efficiency of boars to detect oestrous females housed adjacent to boars 81
Human-animal relationship
Human handling, flock size and responses to an *E. coli* challenge in young chickens 183
Olfactory cues in the relationship between children and their pet dogs 189
Ingestive behaviour
Dry and wet seasonal studies on the grazing behaviour of native N'dama and imported Friesian bulls in a humid tropical environment 245
Grazing dynamics of cattle stocked at heavy rates in a continuous and rotational grazed system 1

Head partitions facilitate feeding by subordinate horses in the presence of dominant pen-mates 179
Herding and forage ingestion by sheep 279
The effects of group size/stocking density on weanling pig performance and behaviour ... 89
The influence of residual stems on biting rates of cattle grazing *Eragrostis lehmanniana* Nees 11
In situ postures
Effect of housing on in situ postures of gestating gilts 265
Isolation stress
Modification of the responses of sheep to isolation stress by the use of mirror panels 331
Laying behaviour
Pre-laying behaviour of hens kept in single- or multiple-hen cages 305
Lighting rhythm
Resting behaviour of Friesian bulls maintained in a tie-stall barn under two patterns of lighting 321
Management
Herding and forage ingestion by sheep 279
Maternal behaviour
A technique for cross-mothering beef calves which does not affect growth 239
Maternal behaviour in ewes following Caesarian section 273
Modelling
Sampling strategies for clustered behavioural elements of short duration 315
Nervousness
Normal and more highly reactive horses. I. Heart rate, respiration and behavioural observations 201
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Oestrus detection
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
Olfactory cues
Flehman behaviour in the domestic horse: discrimination of conspecific odours 227
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119
Olfactory cues in the relations between children and their pet dogs 189
Parasites
Effects of headfly (*Hydrotaea irritans* Fallen) infestations and repellents on ear-flicking and head-shaking behaviour of farmed red deer (*Cervus elaphus* L.) 41
Human handling, flock size and responses to an *E. coli* challenge in young chickens 183
Peep vocalization
Heritability of the peep vocalization in White Leghorn-type chicks 157
Pig
A preliminary experiment on T-maze choice tests 51
Effect of housing on in situ postures of gestating pigs 265
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
Strategies of teat-seeking behaviour in neonatal pigs 57
The effect of group composition on behaviour and performance of weaned pigs 73
The effects of group size/stocking density on weanling pig performance and behaviour ... 89
The efficiency of boars to detect oestrous females housed adjacent to boars 81

Poultry
Cognitive aspects of social behaviour in the domestic fowl (book review) 388
Heritability of the peep vocalization in White Leghorn-type chicks 157
Human handling, flock size and responses to an *E. coli* challenge in young chickens 183
Preferences of domestic hens for cage size and floor types as measured by operant conditioning 147
Pre-laying behaviour of hens kept in single- or multiple-hen cages 305
Repeatability of fear ranks among adult laying hens 297
Predation control
Bonding of sheep to cattle as an effective technique for predation control 19
Pre-laying behaviour
Pre-laying behaviour of hens kept in single- or multiple-hen cages 305
Problematical behaviour
Classification of behaviour problems in dogs: distributions of age, breed, sex and reproductive status 169
Rank order
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291
Head partitions facilitate feeding by subordinate horses in the presence of dominant pen-mates 179
Repeatability of fear ranks among adult laying hens 297
Reserpine
Normal and more highly reactive horses. II. The effect of handling and reserpine on the cardiac response to stimuli 215
Respiration rate
Normal and more highly reactive horses. I. Heart rate, respiration and behavioral observations 201
Resting behaviour
Resting behaviour of Friesian bulls maintained in a tie-stall barn under two patterns of lighting 321
Sampling strategies
Sampling strategies for clustered behavioural elements of short duration 315
Seasonal influences
Dry and wet seasonal studies on the grazing behaviour of native N'dama and imported Friesian bulls in a humid tropical environment 245
Sex-mimicking behaviour
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291
Sexual behaviour
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291
Effects of rearing conditions on sexual performance in the ram: practical use 111
Habituation to boar stimuli: possible mechanism responsible for the reduced detection rate of oestrous gilts housed adjacent to boars 255
Sampling strategies for clustered behavioural elements of short duration 315
Sheep
Agonistic and sex-mimicking behaviours as related to rank proximity in rams (*Ovis aries*) 291
Bonding of sheep to cattle as an effective technique for predation control 19
Bonding of young sheep to heifers 31
Effects of rearing conditions on sexual performance in the ram: practical use 111

Heifer disposition and bonding of lambs to heifers 27
Herding and forage ingestion by sheep 279
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119
Maternal behaviour in ewes following Caesarian section 273
Modification of the responses of sheep to isolation stress by the use of mirror panels 331
Suckling behaviour of artificially-reared lambs: what kind of teat elicits spontaneous suckling? 99
Short duration behavioural elements
Sampling strategies for clustered behavioural elements of short duration 315
Social behaviour
Activity patterns and companion preferences of domestic goat kids 137
Stress
Modification of the responses of sheep to isolation stress by the use of mirror panels 331
Suckling behaviour
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119
Suckling behaviour of artificially-reared lambs: what kind of teat elicits spontaneous suckling? 99
Tactile cues
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119
Teat-seeking behaviour
Strategies of teat-seeking behaviour in neonatal pigs 57
Visual cues
Interactions between normal ewes and newly born lambs deprived of visual, olfactory and tactile sensory information 119
Welfare
A preliminary experiment on T-maze choice tests 51
Preferences of domestic hens for cage size and floor types as measured by operant conditioning 147